

PATENT

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Van Damme et al.

Art Unit: 1752

Application No. 10 002,944

Examiner: Barbara Lee Gilliam

Filed: November 2, 2001

For: PROCESSLESS LITHOGRAPHIC
PRINTING PLATE

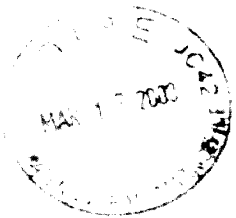
AMENDMENTS TO CLAIMS MADE IN
RESPONSE TO OFFICE ACTION DATED DECEMBER 12, 2002

Amendments to existing claims:

2. (Amended) A material according to claim 1 wherein the organic compound is derived [is] from poly(styrene sulfonic acid) or a salt thereof, or poly(vinyl phosphonic acid) or a salt thereof.

5. (Amended) A material according to claim 1 wherein the oleophilic imaging layer comprises carbon black or graphite as an IR-absorbing compound.

6. (Amended) A material according to claim 1 wherein the cross-linked hydrophilic upper layer comprises oxides or hydroxides of beryllium, magnesium, aluminum, silicon, gadolinium, germanium, arsenic, indium, tin, antimony, tellurium, lead, bismuth, titanium or a transition metal.



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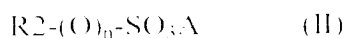
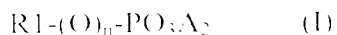
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**PENDING CLAIMS AFTER AMENDMENTS MADE IN
RESPONSE TO OFFICE ACTION DATED DECEMBER 12, 2002**

1. A negative-working heat-sensitive material for making a lithographic printing plate by direct-to-plate recording, the material comprising in the order given a lithographic base having a hydrophilic surface, an oleophilic imaging layer and a cross-linked hydrophilic upper layer, characterized in that said cross-linked hydrophilic upper layer comprises an organic compound corresponding to one of the following formula:



wherein n is 0 or 1; A is hydrogen, a counter ion or an alkyl group; R1 is an organic radical; and R2 is a macromolecular organic radical.

2. A material according to claim 1 wherein the organic compound is derived from poly(styrene sulfonic acid) or a salt thereof, or poly(vinyl phosphonic acid) or a salt thereof.

3. A material according to claim 1 wherein the oleophilic imaging layer has a dry coating weight between 0.1 and 0.75 g m².

4. A material according to claim 1 wherein the oleophilic imaging layer comprises a heat-sensitive binder.

5. A material according to claim 1 wherein the oleophilic imaging layer comprises carbon black or graphite as an IR-absorbing compound.

6. A material according to claim 1 wherein the cross-linked hydrophilic upper layer comprises oxides or hydroxides of beryllium, magnesium, aluminum, silicon, gadolinium, germanium, arsenic, indium, tin, antimony, tellurium, lead, bismuth, titanium or a transition metal.

7. A material according to claim 1 wherein the lithographic base is a grained and anodized aluminum support or a flexible support provided with a cross-linked hydrophilic base layer.

8. A material according to claim 1 wherein the cross-linked hydrophilic upper layer has a dry thickness between 0.3 and 5 μm .

9. A direct-to-plate method of making a lithographic printing plate comprising the steps of:

- (i) providing a material according to any of the preceding claims;
- (ii) image-wise exposing the material to an infrared laser beam having an intensity higher than 0.1 mW μm^2 ;
- (iii) contacting the material with fountain solution and ink.

10. A method according to claim 9 wherein, before or after step (ii), the material is mounted on a cylinder of a printing press.